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## Product Data Sheet

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Product Name: Ipilimumab (MDX-010)

Cat. No.: GC31951

### Chemical Properties

Cas. No. 477202-00-9

SMILES [Ipilimumab]

Formula  $C_{6742}H_{9972}N_{1732}O_{2004}S_4O$  M.Wt 145313.36

Solubility Storage Store at -80°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Protocol

#### Cell Experiment

Cell lines PBMCs

Add ipilimumab at the initiation of ATC expansion cultures from healthy donors at various concentrations ranging from 0 to 50 µg/mL. ATC(activated T cells) are harvested on day 14, armed with EGFRBi or CD20Bi, and co-cultured at 25:1 E:T(effector:target) ratio for 18 hours with EGFR positive pancreatic cancer cell line (COLO356/FG) or 4 hours with CD20 positive Burkitt's lymphoma cell line (Daudi) for cytotoxicity assay. BiAb-mediated tumor specific cytotoxicity is measured by 51Cr release assay.

Concentrations 0, 0.5, 5.0, and 50 µg/mL

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Incubation time      14 days

**Animal Experiment**

Animal models      Purpose-bred cynomolgus monkeys

Formulation      Saline

Dosages      3 mg/kg or 10 mg/kg

Administration      i.v.

Conversion of different model animals based on BSA (Value based on data from FDA Draft Guidelines)

Species	Mouse	Rat	Rabbit	Guinea pig	Hamster	Dog
Weight (kg)	0.02	0.15	1.8	0.4	0.08	10
Body Surface Area (m <sup>2</sup> )	0.007	0.025	0.15	0.05	0.02	0.5
K <sub>m</sub> factor	3	6	12	8	5	20

Animal A (mg/kg) = Animal B (mg/kg) multiplied by  $\frac{\text{Animal B } K_m}{\text{Animal A } K_m}$

For example, to modify the dose of resveratrol used for a mouse (22.4 mg/kg) to a dose based on the BSA for a rat, multiply 22.4 mg/kg by the K<sub>m</sub> factor for a mouse and then divide by the K<sub>m</sub> factor for a rat. This calculation results in a rat equivalent dose for resveratrol of 11.2 mg/kg

**Background**

Ipilimumab (anti-CTLA-4) is an immunomodulatory monoclonal antibody directed against

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the cell surface antigen CTLA-4 and also a type of immune checkpoint inhibitor. MW : 148 kD.

Pembrolizumab plus ipilimumab and nivolumab plus ipilimumab with chemotherapy have been approved by FDA for the first-line treatment of NSCLC patients.[1]

<sup>64</sup>Cu-labeled ipilimumab may be used to noninvasively monitor CTLA-4-expressing tissues in vivo.[2]

[1] Kim CG, et al. J Immunother Cancer. 2021 Dec;9(12):e002780. [2] Ehlerding EB, et al. Mol Pharm. 2017 May 1;14(5):1782-1789.

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